

In the Claims

1. (Currently Amended) An x-ray imaging system comprising:
an x-ray detector configured to detect radiation emitted by an x-ray source and attenuated by a subject to be imaged, and provide an electrical output that may be processed for reconstruction of an image of the subject; ~~and~~

at least one electronic sensor configured to detect gravitational loads placed on the x-ray detector;

a controller configured to read out data from the at least one electronic sensor at predefined intervals and compare the gravitational load of a current reading of an electronic sensor to a threshold and illuminate an LED on the x-ray detector based on the comparison.

2. (Original) The system of claim 1 wherein the x-ray detector includes a circuit board with electronics to control operation of the detector and wherein the at least one electronic sensor is disposed on the circuit board.

3. (Original) The system of claim 1 wherein the at least one electronic sensor is powered by a power supply of an x-ray scanner when the x-ray detector is tethered to the x-ray scanner.

4. (Original) The system of claim 1 further comprising a battery disposed in the x-ray detector that provides power to the at least one electronic sensor.

5. (Canceled)

6. (Currently Amended) The system of claim ~~5~~1 wherein the controller is configured to read out data from the electronic sensor at 250 μ s intervals.

7. (Currently Amended) The system of claim ~~5~~1 wherein the controller is further configured to assign at least one of a time and a date stamp to each reading of an electronic sensor.

8. (Original) The system of claim 7 wherein the controller is further configured to store readings from an electronic sensor in a log.

9. (Original) The system of claim 8 wherein the controller is further configured to write over readings stored on the log such that a limited number of readings are stored in the log.

10. (Original) The system of claim 9 wherein the controller is further configured to compare the gravitational load from a current reading of an electronic sensor to that of a stored reading in the log and if the gravitational load of the current reading exceeds that of the stored reading, then overwrite the stored reading with the current reading.

11. (Canceled)

12. (Currently Amended) The system of claim ~~11~~1 wherein the controller is further configured to illuminate a failure LED if the gravitational load of a current reading of an electronic sensor is equal to or greater than a maximum allowable gravitational load.

13. (Currently Amended) The system of claim ~~11~~1 wherein the controller is further configured to power down electronics of the x-ray detector if the gravitational load of a current reading of an electronic sensor is equal to or greater than a maximum allowable gravitational load.

14. (Currently Amended) The system of claim ~~11~~1 wherein the controller is further configured to provide an error message to a processor to be used to warn a user of a potentially damaging gravitational event.

15. (Currently Amended) The system of claim ~~11~~1 wherein the controller is further configured to proactively initiate and report self-test diagnostics in response to a threshold exceeding gravitational event.

16. (Currently Amended) The system of claim ~~11~~1 wherein the threshold is 10G.

17. (Original) The system of claim 1 wherein the x-ray detector includes flash storage connected to store data output by the electronic sensor.

18. (Original) The system of claim 1 further comprising one or more mechanical sensors that mechanically detect gravitational loads placed on the x-ray detector.

19. (Original) The system of claim 18 wherein the one or more mechanical sensors includes a fluid filled label sealed to a surface of the x-ray detector, wherein the fluid changes color when exposed to a given gravitational load.

20. (Original) The system of claim 1 wherein the at least one electronic sensor includes a plurality of accelerometers.

Claims 21-33 (Canceled)

34. (New) An x-ray imaging system comprising:
an x-ray detector configured to detect radiation emitted by an x-ray source and attenuated by a subject to be imaged, and provide an electrical output that may be processed for reconstruction of an image of the subject;
at least one electronic sensor configured to detect gravitational loads placed on the x-ray detector; and
one or more mechanical sensors that mechanically detect gravitational loads placed on the x-ray detector, wherein the one or more mechanical sensor includes a fluid filled label sealed to a surface of the x-ray detector, wherein the fluid changes color when exposed to a given gravitational load.